

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Juneau****Project Title:**

Juneau - Juneau School District 2008 Southeast Alaska Regional Science Fair

State Funding Requested: \$ 10,000**House District: Juneau Areawide (3-4)**

One-Time Need

Brief Project Description:

Help the Southeast Alaska Regional Science Fair provide high school students the opportunity to integrate their science education with real-world science.

Funding Plan:**Total Cost of Project: \$14,970**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Local Funds					\$700	2009
Other					\$4,000	2009
Total					\$4,700	

*Explanation of Other Funds:**NASA Grant, Alaska Airlines, Waterman-Leighty Foundation, Bartlett Regional Hospital, Conoco Phillips, BP***Detailed Project Description and Justification:**

The Southeast Alaska Regional Science Fair is a small, volunteer run organization whose goals are to:

- provide high school students with the opportunity to integrate their science education with real-world science,
- support interaction between students and the scientific community, and
- inspire young people to science careers.

The purpose of this request is to enable greater participation and quality of educational experience at the 2008 science fair. The Southeast Alaska Regional Science Fair hopes to offer scholarship assistance to students in remote communities of SE Alaska; to continue their ability to defray some of the costs of winning students' advancement to national and international competitions; and to increase their outreach to science faculty in rural schools.

The Southeast Alaska Regional Science Fair organization started out in 1993 with 20 interested students, all from Juneau, but grew quickly. In 2001 they became an affiliate of the Intel International Science and Engineering Fair. Now they serve more than 120 students yearly, from around the southeast region. This year they have 8-10 students in an advanced microbiology and genetics class at Mt. Edgecumbe High School in Sitka who will come to Juneau to compete. The fair is being held in conjunction with the University of Alaska EDGE Program (Experiential Discoveries in Geoscience Education). High school students and teachers from around the state will join in and add to the fair.

Each year, participating students spend 7 to 10 months working on an original scientific research project they develop together with a volunteer scientist mentor from the community, private organization, or from a state and federal agency. The project culminates with participation in the SE Alaska Regional Science Fair which takes place in Juneau in March. Thanks to generous donations from local businesses and organizations the students go home with an aggregate \$6000 in awards and scholarships. Five student projects are chosen to go on to compete at the Intel International Science and Engineering Fair (ISEF) – to be held this year in Atlanta, Georgia.

Intel ISEF 2008 will bring together 1,500 of the brightest young minds nationally and internationally as student science fair finalists. Through their research projects, student finalists will compete for over \$4 million in scholarships, internships and other awards offered in 18 different math, science, and engineering categories. Intel ISEF 08 student finalists are expected from every U.S. state and over 45 countries. Besides the competition, the students join panel discussions with Nobel Prize winners, go on tours of local scientific facilities (such as the Center for Disease Control in Atlanta) and visit with other young scientists from around the world.

In addition, four Southeast Alaska Regional Science Fair student projects are chosen to advance to the Alaska Statewide High School Science Symposium (ASHSSS) in Fairbanks, Alaska. ASHSSS is a University of Alaska (UAF) outreach program in support of students conducting original scientific research. At the symposium, students compete for cash awards, scholarships, and the opportunity to advance to the National Junior Science and Humanities Symposium (NJSHS). If successful there, they go on to compete in the London International Forum.

In past years SE Alaska students have competed successfully at both the INTEL and ASHSSS levels, often with uniquely Alaskan project themes including environmental and natural resource science.

Though the Southeast Alaska Regional Science Fair is a volunteer community organization, it partners with and receives some logistical support from the Juneau School District, and gain the benefit of their tax exempt status. Funding is needed for video production and editing, printing materials, entrance fees, and travel costs.

Project Timeline:

N/A

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

N/A

Grant Recipient Contact Information:

Contact Name: Koren Bosworth

Phone Number: 586-4837

Address: 10014 Crazy Horse Drive Juneau AK 99801

Email: bosworth@alaska.com

Has this project been through a public review process at the local level and is it a community priority? ☐ Yes ☒ No

2008 SOUTHEAST ALASKA REGIONAL SCIENCE FAIR



Feb. 28, 2008

Dear Rep. Kertula's office,

I am writing as a volunteer for the Southeast Alaska Regional Science Fair, to ask that you consider our organization in your budget. We are a small, volunteer run organization whose goals are to:

- *provide high school students with the opportunity to integrate their science education with real-world science,*
- *to support interaction between students and the scientific community, and*
- *to inspire young people to science careers.*

The purpose of this request is to enable greater participation and quality of experience at the 2008 science fair. We hope to offer scholarship assistance to students in remote communities of SE Alaska; we hope to continue our ability to defray some of the costs of winning students' advancement to national and international competitions; and we hope to increase our outreach to science faculty in rural schools.

Our organization started out in 1993 with 20 interested students, all from Juneau, but we grew quickly. In 2001 we became an affiliate of the Intel International Science and Engineering Fair. Now we serve more than 120 students yearly, from around the southeast region. This year we have 8-10 students in an advanced microbiology and genetics class at Mt. Edgecumbe High School in Sitka who will come to Juneau to compete. The fair is being held in conjunction with the University of Alaska EDGE Program (Experiential Discoveries in Geoscience Education). High school students and teachers from around the state that are in this program will be joining in and adding to our fair.

Each year, participating students spend 7 to 10 months working on an original scientific research project that they develop together with a volunteer scientist mentor from the community, private organization, or from a state and federal agency. The project culminates with participation in the SE Alaska Regional Science Fair which takes place in Juneau in March. Thanks to generous donations from local businesses and organizations the students go home with around \$6000 in awards and scholarships. Five student projects are chosen to go on to compete at the Intel International Science and Engineering Fair (ISEF) – to be held this year in Atlanta, Georgia.

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In past years SE Alaska students have competed successfully at both the INTEL and ASHSSS levels, often with uniquely Alaskan project themes including environmental and natural resource science.

Though we are a volunteer community organization we do partner with and receive some logistical support from the Juneau School District, and gain the benefit of their tax exempt status.

I have attached a budget, press clippings, a declaration honoring past fair participants and tax ID information. Thank you for considering the SE Alaska Regional Science Fair for inclusion in the budget.

If you have questions please email or call:

Koren Bosworth – Fair Director, SE Alaska Regional Science Fair
586-4837 723-1931 (cell) bosworth@alaska.com

Yours sincerely,

Koren Bosworth

Southeast Alaska Regional Science Fair Estimated Budget for 2008

Expenses(projected 08)

SE Alaska Regional Science Fair (Juneau, Alaska)

Video production on fair day	\$	300.00
editing, copying, and distribution of recruitment video	\$	100.00
Awards for fair	\$	500.00
Food for judges and students	\$	200.00
Printing posters, PR	\$	200.00
Scholarships aid for 8 Mt. Edgecumbe High School students	\$	800.00
Intel InternationalScience and Engineering Fair Affiliation fee	\$	500.00
Poster boards and materials for 120 student projects	\$	1,040.00

Intel ISEF ('08 -Georgia World Congress Center - Atlanta, Georgia)

Intel InternationalScience and Engineering Fair Registration	\$	800.00
Hotel- 3 rooms -6 nights	\$	1,800.00
Airfair (7 persons - JNU-Atlanta)	\$	5,250.00
Meals - 7 people 6 days	\$	1,500.00
ISEFevents - tours & workshops at science facilities	\$	300.00

Alaska High School Science Symposium (UAF - Fairbanks, Alaska)

Airfare (5 persons - JNU-Fairbanks)	\$	1,180.00
Meals (5 persons -3 days)	\$	500.00
Expenses Total	\$	14,970.00

Revenue (projected 08)

GRANTS and DONATIONS

NASA Grant (Dr. Cathy Connor - Univ. of Alaska EDGE Program)	\$	5,000.00
Local businesses	\$	1,250.00
Alaska Airlines (3 tickets to Seattle)	\$	700.00
Waterman-Leighty Foundation	\$	1,000.00
Bartlett Regional Hospital - Juneau	\$	1,000.00

Grants/donations total **\$ 8,950.00**

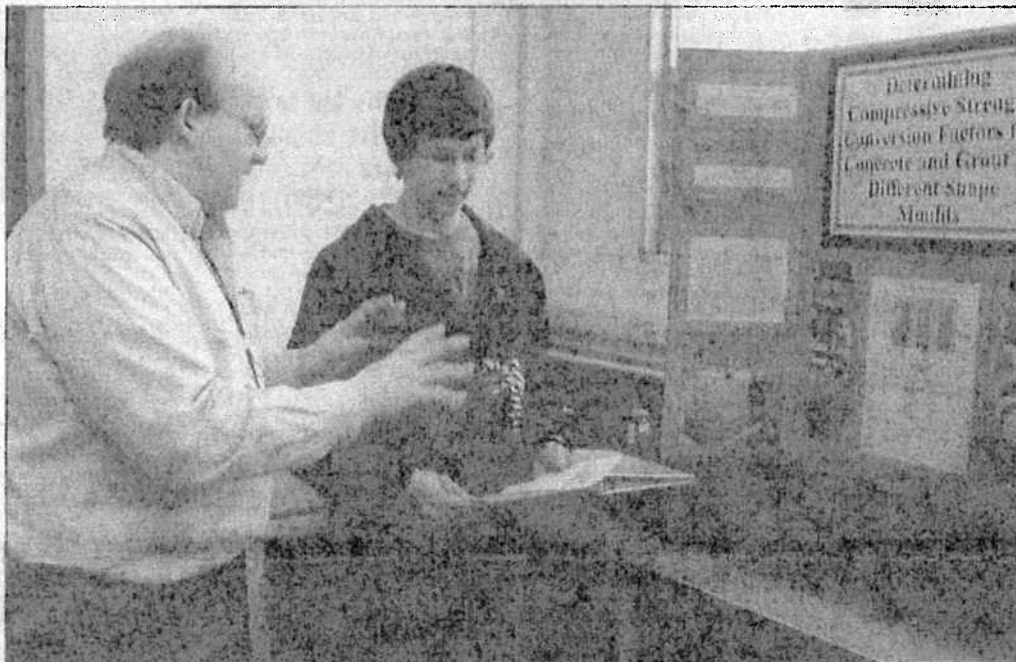
Conoco Philips (not committed for the last year)	\$	1,000.00
BP (not committed for the last 2 years)	\$	1,000.00
Possible donations for 08	\$	2,000.00

IN-KIND Services and Donations

Misc. Printing (Juneau School District - Xerox)	\$	500.00
Space Rental (Juneau School District)	\$	200.00

Volunteer scientific mentors (130) @50 hrs	= 6500 hrs
Volunteer fair organizers (50) @30hrs	= 1500 hrs.
Volunteer fair judges (130) @7 hrs	= 910 hrs
Tshirts and printing (AT&T Alascom)	\$ 750.00
Materials, logistical and project poster printing support from NOAA Fisheries/ Alaska Fisheries Science Center	\$ 700.00
Local organizations - - Awards donated directly to students	\$ 6,000.00
Awards Ceremony space rental (Univ.of AK SE - Egan Library)	\$200
Volunteer housing/food for out-of-town students	\$ 300.00

Hands-on science



BRIAN WALLACE / JUNEAU EMPIRE

Jonathan Smith, advanced science teacher for Juneau-Douglas High School, talks Wednesday with his student Craig Kasberg about his science project. The annual JDHS science fair is this weekend.

Fair to highlight budding scientists

JDHS students pair up with mentors to prepare for weekend contest

By ERIC MORRISON
JUNEAU EMPIRE

Most high school students don't get to study glaciology or bears, at least not personally. In Juneau, it's almost a requirement.

Nearly 140 Juneau-Douglas High School students will compete this weekend in the regional science fair at the Marie Drake gymnasium. An open house will be held from 4:30 to 9 p.m. Friday and from noon to 1:30 p.m. on Saturday.

JDHS advanced physical science

teacher Jonathan Smith said the field of young scientists is mainly comprised of freshmen and sophomores, who are required to participate for his class and the advanced biology classes.

The fair is open to all high school students, however.

"They're doing real science in the community in a laboratory experience," Smith said. "That's the idea, to get the students out of the high school and doing something extremely authentic in the scientific world."

Each student is paired with a scientist-mentor from the community and works on some uniquely Alaskan project, he said.

"What's happening now is those students who want to be competitive tend to

seek out those mentors in town who are doing cutting-edge research," Smith said.

Past and present projects include issues closely tied with the community, such as intertidal ecology, glaciology and research on whales and avalanches.

"A lot of the information that people can learn from these projects is actually things they might want to know about their community," Smith said. "Because these are things that are done in Juneau, Alaska, and are done well."

Freshman Marie Speegle, 15, got to work with scavenging "garbage" bears alongside scientists from the Alaska Department of Fish & Game. Her project involved tracking two black bears with radio

Please see FAIR, Page A3

Fair: Awards ceremony to be held Saturday

collars and studying when and how often they go into urban areas.

"I just thought the entire thing was fascinating because bears are just really interesting," Speegle said.

Using a specialized computer program, Speegle was able to see where and when each bear was visiting particular Juneau neighborhoods. She also got the chance to go with the scientists while they collared a problematic bear, even though the encounter wasn't used in her data.

Speegle not only learned scientific methods during her nearly 50 hours of work; she also learned about Juneau's festering garbage bear problem.

"It would probably be smart to deal with your garbage better when it is late summer because they do go into neighborhoods way more," she said.

Not all projects revolved around Juneau's strong connection to the natural world. Freshman Craig Kasberg, 15, compared

the strength of concrete and grout in different shapes and sizes, with the help of a civil engineer.

"I just learned a lot about concrete and grout and how to apply different math calculations and equations to realize different situations," he said.

After spending nearly 25 hours on his project, Kasberg said he is thinking about choosing civil engineering as a possible career.

Two individuals and one team will be selected Saturday to advance to the international science fair competition this May in Albuquerque, N.M., Smith said. Winners also will be selected to compete in the Alaska Science Symposium next March, with a chance to advance to the national competition.

"We're actually involved now in two different competitions, and our students are competing to go on to the nationals in both of those," Smith said.

This year's awards ceremony

will be held from 7 to 9 p.m. Saturday in the Egan Library at the University of Alaska Southeast campus in Auke Bay.

Smith said JDHS students do well when competing nationally but often have stiff competition.

"Certainly we are gifted with the number of scientists in town who are willing to be mentors," he said. "At the same time we're limited by the fact that we're a town of 30,000 people and it's a closed community."

The Juneau students often compete against teams and individuals mentored by professors from the likes of Massachusetts Institute of Technology, Yale and Harvard, Smith said.

"They have equipment at their disposal, like nuclear reactors and particle accelerators," he said. "At the same time, we hold our own in those categories in which Juneau excels."

• Eric Morrison can be reached at eric.morrison@juneauempire.com.

Juneau Empire

Thursday, March 15, 2007

Students at science fair go for relevance

Local environment
engenders ideas
for science projects

By ERIC FRY
JUNEAU EMPIRE

Brenna Heintz and Clay Wertheimer wondered if creosote-covered pilings at docks significantly added hydrocarbons to Gastineau Channel.

"We're really interested in the environment," Heintz said. "So we wanted to see if creosote pilings made a big impact on the water."

Libby Parker wanted to see how long 1,600 gallons of diesel fuel would linger in Auke Bay sediment after the Sept. 21 spill.

"I really wanted to do something that was relevant," Parker said. "I could look out my door and do an experiment that was very relevant to Juneau."

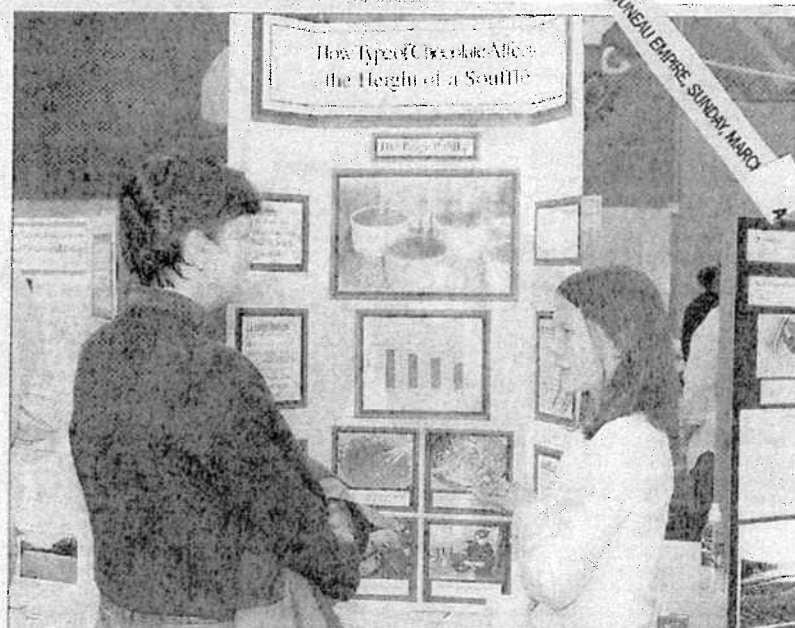
Those Juneau-Douglas High School students and 112 others participated in the 2005 Southeast Alaska Regional Science Fair held Saturday at the Marie Drake gym.

The event uses the services of about 140 judges and 95 mentors, some of whom play both roles. The fair's winning individual and team will compete at the Intel International Science and Engineering Fair to be held May 8-14 in Phoenix, Ariz.

Kristina Paulick sings and plays the French horn. She looked for a topic that met her musical interests, the effects of the density of water on pitch. Her godfather, musician and sound engineer Greg Burger, served as her mentor.

"She came up with most of the ideas and I did a lot of steering," Burger said. "It was really interesting. I actually learned some things about acoustics that I thought I knew but didn't. I had to refresh my conceptions of acoustics."

Paulick made up 25 different



DAVID J. SHEARLEY / JUNEAU EMPIRE

Like science for chocolate: Paige Pahike, a freshman at Juneau-Douglas High School, explains to Donna Davin the outcome of her science project during Saturday's science fair at the Marie Drake gym. Pahike's project determined how the type of chocolate used to make a souffle affects the height of the finished dessert dish. The highest rise came with bittersweet chocolate, then milk chocolate, white chocolate and, finally, unsweetened.

I wanted to see what type of habitat would be most important to deer by figuring what type of habitat has the most new annual growth.

MATT HEMENWAY

Student scientist

concentrations of sugar in water to reflect different densities. She tested the pitch by striking a glass full of the water with a wooden pendulum, the sound from which was picked up by a microphone on a laptop computer. A software program converted the sounds to hertz, the basic unit of frequency.

Paulick said the fair's project is like a lab in science class, but with a difference.

"I had to do it all myself," she said, except for Burger's help. "There wasn't any preset way of doing it... There wasn't a lesson plan to follow."

Matt Hemenway, who has lived in remote Elfin Cove, also pursued his interests at the fair. He's a hunter and naturalist interested in deer. So he studied what type of forest habitat was

best suited as a source of food for deer.

Deer like to eat blueberry and huckleberry plants — called vacinium plants — but the current year's growth is the only digestible part of that vegetation, Hemenway said.

"I wanted to see what type of habitat would be most important to deer by figuring what type of habitat has the most new annual growth," he said.

Hemenway went into old-growth and second-growth forests near Switzer Creek and old-growth woods out the road to find 25 small plots of land to survey for plants.

"Second-growth forests are pretty much barren of food," he concluded.

For some willing students, the fair's project starts long be-

fore the fall and continues after the awards are passed out.

Heintz and Wertheimer, who, since July, studied a particularly toxic type of hydrocarbon in Gastineau Channel, said the greatest concentration was in the summer and might be related to recreational boats.

They didn't see significant differences between water near docks that use creosote-covered pilings and water where more expensive steel pilings are in use.

Parker, who studied the effects of the Auke Bay diesel spill, said she'll continue her work.

She tested the effects of the spill by counting the survival of gammarid amphipods, which are tiny crustaceans, in samples of the sediment.

More lived as time went on, illustrated by a nice logarithmic curve. She estimates the sediment will be clean on the 172nd day after the spill, and she wants to be there for that.

The finalists were: Levi Benning and TJ Preston, Sara Bogert, Jacey Bosworth and Erika O'Sullivan, Lia Heifetz, Brenna Heintz and Clay Wertheimer, Kyle O'Brien, Libby Parker, Sam Post, and Aislinn Shaul-Jensen.

• Eric Fry can be reached at eric.fry@seanet.com.

THE ALASKA LEGISLATURE



* HONORING *

* 2005 SOUTHEAST ALASKA SCIENCE FAIR *

* PARTICIPANTS AND WINNERS *

The Twenty-fourth Alaska State Legislature is proud to recognize and honor the 2005 Southeast Alaska Science Fair participants, finalists and winners. The students involved in this year's event came well prepared for the competition with impressive projects and deserve our salute for their hard work, and a job well done.

Since 1993, students from Alaska's Panhandle have responded to an open invitation to participate in this annual competition held in Juneau. This event is designed to challenge students who have an interest in the academics of science and to promote an overall positive learning experience through research and development. This year's event involved 130 students from Juneau, Hyder, and Prince of Wales. It also included the essential support of 100 mentors who provided guidance to the students as well as 140 judges from the science and engineering community. Family members and local business sponsors encouraged and supported the participants throughout the competition.

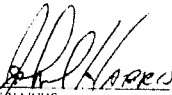
This year's 2005 winners will be advancing to the Intel International Science & Engineering Fair in Phoenix, Arizona, May 8-14, 2005. They are:

Joey Bosworth, Erika O'Sullivan, Sara Bogert, and Sam Post.

Runners Up: Brenna Heintz and Clay Wertheimer will attend as observers.

We congratulate these top competition winners and wish them the best of luck in the national event. The Twenty-fourth Alaska State Legislature is proud of these competition winners and the entire student participants, teachers, volunteers, and family supporters.



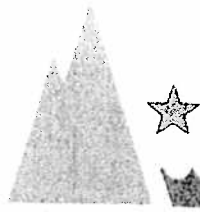

JOHN HARRIS
SPEAKER OF THE HOUSE


BEN STEVENS
PRESIDENT OF THE SENATE

Date: May 2, 2005


BRUCE WEYBRAUCH
PRIME SPONSOR

Cosponsors: Representatives Kemula, Harris, Anderson, Berkowitz, Cusma, Gaglio, Crawford, Croft, Dahlstrom, Elkins, Gata, Gardner, Gatto, Greenberg, Guttenberg, Hawkes, Holm, Iude, Kapsner, Kelly, Kohring, Kott, LeDoux, Lynn, McGuire, Meyer, Neumann, Olson, Ramias, Rosenberg, Salmon, Samuels, Seaton, Sniotz, Thomas, Wilson; Senators Eason, Hee, Stevens, Hinde, Cowdery, Davis, Dyson, Ellis, French, Green, Gross, Hartman, Huggins, Koskesh, Olson, Seckins, Stedman, Gary Stevens, Theriault, Wagones, Wilken.



JUNEAU SCHOOL DISTRICT
CITY AND BOROUGH OF JUNEAU

10014 CRAZY HORSE DRIVE • JUNEAU, ALASKA 99801-8529 • (907) 523-1700

To Whom It May Concern:

The City and Borough of Juneau School District, also referred to as the Juneau School District, is a political subdivision of the City and Borough of Juneau. Being a Municipal Government, the City and Borough of Juneau is not issued an exemption letter by the Internal Revenue Service.

Please refer to the attached letter from the Internal Revenue Service. Our tax exempt number is 92-6000101.

Sincerely,

Nancy L. Barto
Nancy L. Barto
Finance Officer

Attachment

Internal Revenue Service

District
Director

Department of the Treasury

300 N. Los Angeles Street, MS 7043
Los Angeles, CA 90012

RECEIVED JAN 13 1998

CITY & BOROUGH OF JUNEAU
SCHOOL DISTRICT
10014 CRAZY HORSE DRIVE
JUNEAU, AK 99801-8529

Person to Contact:
L. BARRAGAN
Telephone Number:
(213) 894-2336
Refer Reply to:
EO(1120)97
Date:
DECEMBER 1, 1997
EIN: 92-6000101

Dear Taxpayer:

This letter is in response to your request for a copy of the determination letter for the above named organization.

The Internal Revenue Code (IRC) makes no provision for the issuance of exemption letters to instrumentalities of a state or municipal government since Section 115 of the Code excludes their income from the definition of gross income.

According to IRC Section 170, there shall be allowed as a deduction any charitable contribution (payment of which is made within the taxable year) to a governmental unit.

Section 170(c) defines the term "charitable contribution" as a contribution or gift to or for the use of "A state, possession of the United States, or any political subdivision of any of the foregoing, or the United States, or the District of Columbia, but only if the contribution or gift is made for exclusively public purposes."

If you need further assistance, please contact our office at the above address.

Sincerely,



Disclosure Assistant